UNIVERSITY OF ILLINOIS • COLLEGE OF AGRICULTURE • COOPERATIVE EXTENSION SERVICE CIRCULAR

LAWN WEEDS: Identification and Contr

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Cooperative Extension Work in Agriculture and Home Economics: University of Illinois, College of Agriculture, and the United States Department of Agriculture cooperating. Louis B. Howard, *Director*. Acts approved by Congress May 8 and June 30, 1914.
Urbana, Illinois
July, 1963

Cover design: K. E. Cessna

This circular has two purposes: (1) to help you identify most weeds that occur in Midwestern lawns; and (2) to recommend a method of control for a particular weed.

The first section of the circular (pages 1 to 19) contains a key for identifying common lawn weeds, a descriptive list of these weeds, including photographs and drawings, and a descriptive list of less common weeds. The weeds in these descriptive lists appear in alphabetical order under "Broadleaved Weeds" and "Grassy Weeds." They are listed by the most common name, followed by other common names, if any, and the botanical name.

The second section of the circular (pages 20 to 27) contains a general discussion of weed control and a list of controls for specific weeds. This list includes instructions for use of the material, the best time to apply, and the probable degree of control for each weed.

The key, descriptive lists, and list of controls will help you identify and control most weeds likely to be found in your lawn. Only the common lawn weeds are listed in the key. If you cannot find a particular weed in the key, check through the "Descriptive List of Less Common Weeds." If you are still unable to identify the weed, you may want to ask your county extension adviser for help.

IDENTIFICATION OF WEEDS

The following key is made up of alternative statements about the plant's structure or appearance. Choose from the paired statements the one that most closely describes the plant to be identified. Be sure to read each of the paired statements before making your choice.

When you have made your choice, you have either identified the plant or have chosen to go on to the next pair of statements. If you need to proceed, continue checking the paired statements until you have identified the weed. Notice that you always choose one of two alternatives, and that these two alternatives bear the same number, even though the second number may be widely separated from the first one. Notice also that a given number is used for only one pair of headings and is not repeated.

To familiarize yourself with the key, you may want to "key out" a weed that you already know. To key out a dandelion, for example, you would go from 1 (Leaves in a rosette or alternate) to 7 (Leaves in a rosette) to 8 (Plant with milky juice and pointed, lobed leaves).

Following the name of each weed in the key is the number of the page on which the weed appears in the "Descriptive List of Common Lawn Weeds." For dandelion, you would turn to page 7. On that page is a photograph of a dandelion plant, a drawing of a dandelion leaf to aid identification, a description of the plant's physical appearance and characteristics, and a page reference to the control for dandelions.

KEY TO COMMON LAWN WEEDS

(For definitions of terms used in this Key, see Glossary on page 4.)

Broadleaved Weeds

1. Leaves opposite or whorled.
   2. Leaves whorled. — CARPETWEED page 6
   2. Leaves opposite.
      3. Plant milky. — PROSTRATE SPURGE page 10
      3. Plant not milky.
         4. Plant a creeper rooting near base of leaves. — GROUND IVY page 8
         4. Plant not rooting near base of leaves.
            5. Leaves small; a line of hairs on definite petiole. — COMMON CHICKWEED page 7
            5. Leaves without line of hairs on petiole or without petiole.
               6. Leaves hairy, attached directly to stem; like mouse ears. — MOUSE-EAR CHICKWEED page 9
               6. Top leaves attached directly to stem; bottom leaves have petioles. Many flowers in leaf axil. — HENBIT page 9

1. Leaves in a rosette or alternate.
   7. Leaves in a rosette.
      8. Plant with milky juice and pointed, lobed leaves. — DANDELION page 7
      8. Plant without milky juice.
         9. Plant with dark-green, pointed, many-lobed leaves. — SHEPHERD'S PURSE page 12
         9. Plant without dark-green pointed, many-lobed leaves.
            10. Plant with rather thick, arrow-shaped leaves in a rosette. — RED SORREL page 11
            10. Plant without arrow-shaped leaves.
               11. Plant with broad leaves with definite veins. — RUGEL'S PLANTAIN page 12
               11. Plant with narrow leaves with definite veins. — BUCKHORN PLANTAIN page 6
   7. Leaves alternate.
      12. Creeping or climbing plant with rounded, arrow-shaped leaves. — FIELD BINDWEED page 8
      12. Plant without rounded, arrow-shaped leaves.
         13. Plant with small leaves; joints covered with thin, papery sheath. — PROSTRATE KNOTWEED page 10
         13. Plant without small leaves; joints not covered with thin, papery sheath.

14. Plant with large, hairy, "geranium-like" leaves.
ROUNDLEAVED MALLOW page 11
14. Plant without large, hairy, "geranium-like" leaves.
15. Leaves round and hollow, often clumped; onion-like odor.
WILD GARLIC page 13
15. Leaves not round and hollow; without onion-like odor.
16. Plant with 3 heart-shaped leaflets; yellow flowers.
YELLOW WOODSORREL page 14
16. Plant with 3 leaflets and white flower head.
WHITECLOVER page 13

Grassy Weeds

1. Plant fine-textured.
2. Leaf tip like a keel (like Kentucky bluegrass).
ANNUAL BLUEGRASS page 14
2. Leaf tip not like a keel; plant forms mat.
3. Ligule with many long, white hairs. BERMUDAGRASS page 15
3. Ligule without many long, white hairs.
4. Leaf sheath usually not tight about stem; leaves without noticeable lines. NIMBLEWILL page 17
4. Leaf sheath tight about stem; leaves with noticeable lines.
CREEPING BENTGRASS page 16

1. Plant coarse-textured.
5. Lower nodes (joints) greatly enlarged. FALL PANICUM page 16
5. Lower nodes not greatly enlarged.
6. Underside of leaf glossy; definite lines on top of leaf.
TALL FESCUE page 19
6. Underside of leaf not glossy.
7. Leaf with clawlike auricles. QUACKGRASS page 18
7. Leaf without clawlike auricles, lines on top of leaf.
8. Leaf rough along edge (sawtoothed); 20-40 seed grouped on spikelet. STINKGRASS page 18
8. Leaf smooth along edge; seed not grouped 20-40 on spikelet.
9. Leaf with many long hairs near base and yellow bristles on seed head. YELLOW FOXTAIL page 19
9. Leaf without many long hairs near base and yellow bristles on seed head.
10. Leaf dark-green; many seed packed on fingerlike projections. Sheaths flattened. GOOSEGRASS page 17
10. Leaf light-green, may be tinged with purple. Seed often single on fingerlike projections. CRABGRASS page 15

GLOSSARY

Alternate — leaves borne singly at regular intervals; not opposite.

Annual — plant that completes its life cycle, from germination to seeding, in one year.

Auricle — clawlike appendage; extension of grass collar.

Axil — upper angle between leaf or branch and stem.

Blade — expanded part of a leaf.

Collar — junction of leaf blade and sheath in grasses and sedges.

Crown — junction of root and stem.

Glume — small, chaffy bract on a grass spikelet.

Inflorescence — entire group of flowers on a plant.

Joint — place where one or more leaves are attached to stem.

Keel — formed to resemble the keel of a boat.

Leaflet — blade of a compound leaf.

Ligule — membranous projection at top of sheath.

Lobe — usually a rounded projection.

Midrib — central vein of a leaf.

Node — see joint.

Opposite — two leaves or buds arranged on opposite sides of a node.

Panicle — loose, irregular, and branched inflorescence.

Perennial — plant that lives more than two years.

Petiole — stalk of a leaf.

Rhizome — underground stem modified for food storage and asexual reproduction.

Rosette — several leaves usually arising from a center at or near soil surface.

Sheath — lower part of grass leaf usually enclosing stem.

Spike — inflorescence with flowers attached directly to unbranched stem.

Spikelet — unit of inflorescence of grasses and sedges with one or more flowers between two empty glumes.

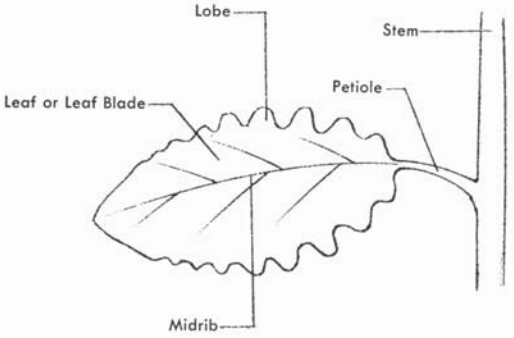
Stem — part that supports flowers or leaves.

Taproot — large primary root more distinct than any of its branches.

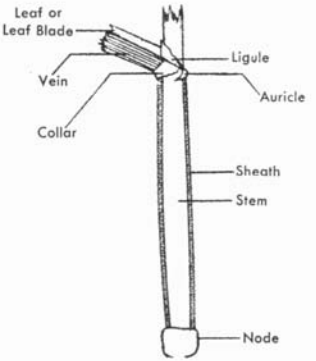
Vascular — pertaining to ducts or vessels in a plant.

Vein — vascular bundle.

Whorled — arrangement of three or more leaves or other organs in a circle around an axis.



Broadleaved Weed



Grassy Weed

Descriptive List of Less Common Weeds

BLACK MEDIC, Yellow trefoil (*Medicago lupulina*). Annual, biennial, or perennial. Spreading. Leaves divided into 3 leaflets; center leaflet on short stalk. Flowers yellow and globular. *Control C, page 25.*

CANADA THISTLE, Creeping thistle (*Cirsium arvense*). Perennial. May spread by horizontal roots. Leaves spiny, have crinkled edges, often slightly lobed. *Control A, page 24.*

CHICORY (*Cichorium intybus*). Perennial. Large, deep, fleshy taproot. Leaves similar to dandelion (see page 7). Flowers bright blue, borne on tall stalks. *Control A, page 24.*

CURLED DOCK, Sour dock (*Rumex crispus*). Perennial. Large yellow taproot. Leaves smooth, 6-12 inches long; wavy, curled edges. Petiole short; papery sheath surrounding stem. *Control A, page 24.*

HEAL-ALL, Self-heal (*Prunella vulgaris*). Perennial. Stems 4-sided, root freely at nodes. Leaves oval, opposite; margins smooth or slightly notched. *Control A, page 24.*

HEDGE BINDWEED (*Convolvulus sepium*). Perennial. Leaves larger and sharper pointed at tips and basal lobes than leaves of field bindweed. Flowers white or pinkish, 1½-2 inches wide. *Control A, page 24.*

PURSLANE SPEEDWELL (*Veronica peregrina*). Annual or winter annual. Leaves near base small, opposite, slightly toothed; upper leaves have smooth margins. Flowers small, white; occur in axils of upper leaves. *Control C, page 25.*

ROUGH PIGWEED, Redroot (*Amaranthus retroflexus*). Annual. Red taproot. Leaves dull, long petioles. Stems often become large and woody. Frequent in new lawns. *Control A, page 24.*

SANDBUR, Burgrass (*Cenchrus pauciflorus*). Annual. Often roots at nodes. Leaves smooth, twisted; 2-5 inches long. Small spiny burs. *Control D-2, page 26.*

SPOTTED SPURGE, Nodding spurge (*Euphorbia maculata*). Annual. Erect and spreading. Milky juice. Leaves larger than those of prostrate spurge; leaf edges slightly toothed, noticeable blotches on leaves. *Control C, page 25.*

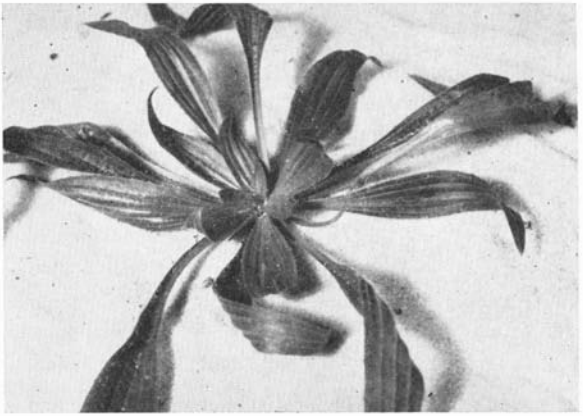
VIOLET (*Viola spp.*). Perennial. Often escapes cultivation. Flowers usually deep violet color, rarely rose or white. *Control C, page 25.*

WILD CARROT, Queen Anne's lace (*Daucus carota*). Biennial. Carrot-like odor. Fleshy taproot. Leaves finely divided, hairy, in rosette. *Control A, page 24.*

WILD ONION (*Allium canadense*) Perennial. Similar to wild garlic (see page 13), except that wild onion leaves are not hollow. *Control B, page 25.*

YARROW, Milfoil (*Achillea millefolium*). Perennial. Offensive odor and bitter taste. Leaves finely divided, fernlike, covered with hairs. *Control C, page 25.*

YELLOW NUTGRASS (*Cyperus esculentus*). Perennial. Erect, grasslike, yellow-green. Stem triangular. Leaves 3-ranked. *Control A, page 24.*

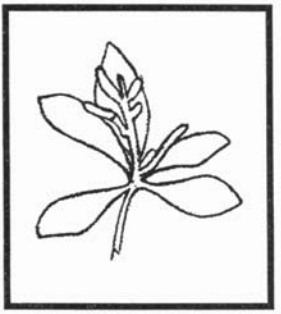


BUCKHORN PLANTAIN, Ribgrass
Plantago lanceolata

leaf

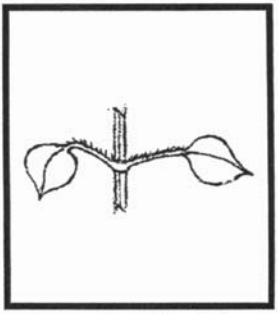
Perennial. Leaves in flattened rosette at soil surface; usually long and narrow, 3-5 prominent veins. Seeds borne on erect, leafless stem terminating in short, cylindrical seed spike. Flowers inconspicuous. *Control A, page 24.*

CARPETWEED
Mollugo verticillata



leaves and portion of stem

Annual. Leaves smooth, tongue-like, 5-6 at each joint. Stems branch in all directions along soil surface, forming flat, circular mats. Flowers small, white, several at each joint. *Control A, page 24.*



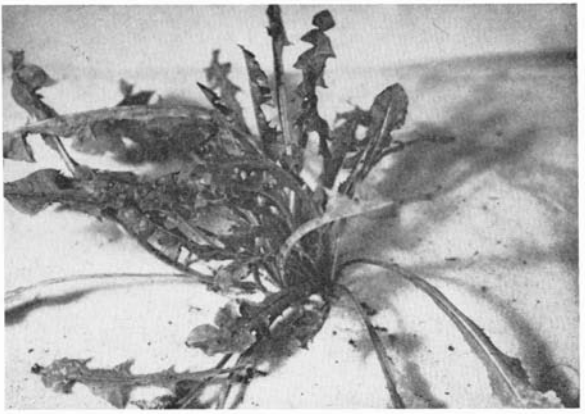
leaves and portion of stem

Annual or winter annual. Leaves simple, opposite, smooth and pointed at tips; petioles have line of hairs on one side. Flowers small, white, with 5 deeply notched petals. *Control C, page 25.*

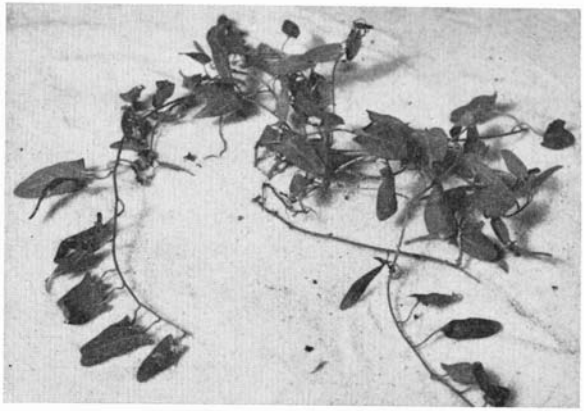
COMMON CHICKWEED
Stellaria media

leaf

Perennial. Stem does not elongate but produces rosette of leaves at or just below soil surface. Flowers yellow, borne on long, hollow stalks. *Control A, page 24.*



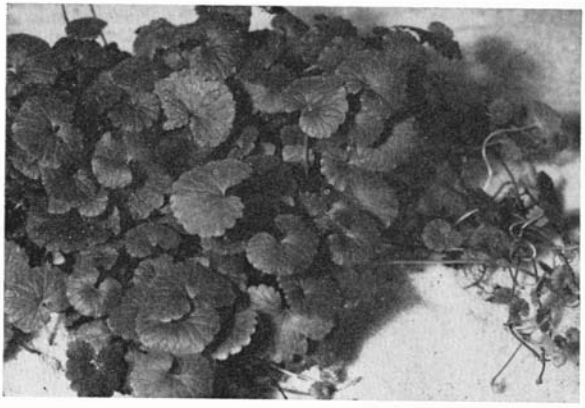
DANDELION
Taraxacum officinale



FIELD BINDWEED
Creeping jinny, small morning glory
Convolvulus arvensis

leaf

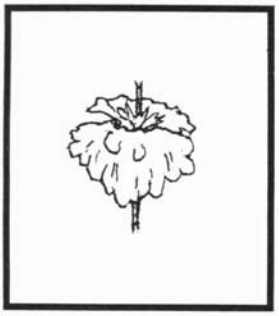
Perennial. Twining and spreading. Leaves rounded, arrow-shaped, smooth and slender. Flowers white or pink, about 1 inch wide. *Control A, page 24.*



GROUND IVY, Creeping Charlie
Glechoma hederacea

leaf

Perennial. Creeping. Leaves opposite, round- to kidney-shaped, rounded teeth; long petioles; give off minty odor when crushed. Stems 4-sided, root at nodes. Flowers bluish-purple, borne in small clusters in leaf axils. *Control C, page 25.*



upper leaves and flowers

Annual. Smooth, much-branched. Leaves opposite, hairy, rounded teeth. Lower leaves have petioles; upper leaves do not have petioles, and are attached directly to stem. Stems 4-sided, smooth. Flowers clustered in upper leaf axils. *Control C, page 25.*

HENBIT

Lamium amplexicaule

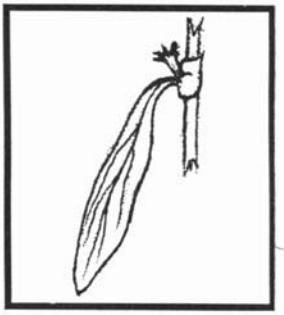
leaves

Perennial. Spreading to erect. Leaves opposite, hairy, attached directly to stem. Flowers with 5 sepals and 5 white petals. *Control C, page 25.*

MOUSE-EAR CHICKWEED

Cerastium vulgatum

PROSTRATE KNOTWEED, Doorweed
Polygonum aviculare



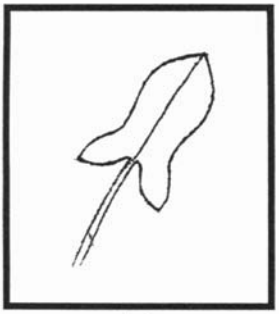
leaf and portion of stem

Annual. Leafy. Stem wiry, branching, forms dense mat; each joint on stem covered with thin, papery sheath. Leaves alternate, narrowed at base, pointed at tip. Flowers tiny, borne in clusters in leaf axils. *Control C, page 25, or Control F, page 26.*

PROSTRATE SPURGE, Milk purslane
Euphorbia supina

leaves and portion of stem

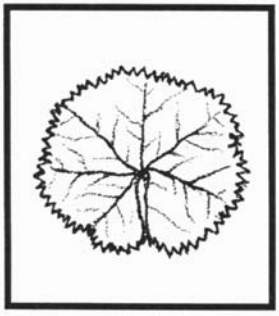
Annual. Leaves opposite, spotted, hairy. Stems prostrate, branching, ooze milky juice when broken. *Control C, page 25.*



leaf

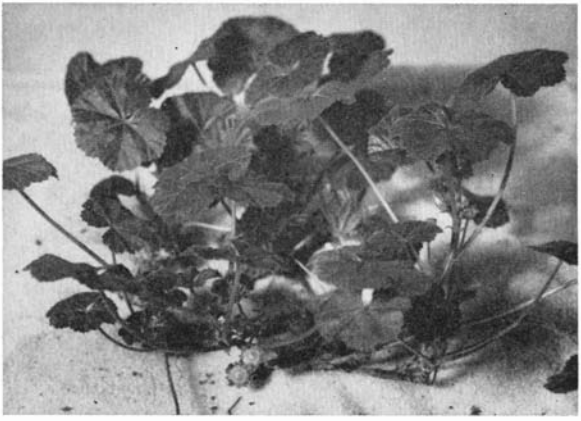
Perennial. Acid-tasting. Leaves arrow-shaped, thick and smooth. Stems slender; many may arise from single crown. Flowers yellow to red, borne at top of plant. *Control C, page 25.*

RED SORREL, Sheep sorrel
Rumex acetosella

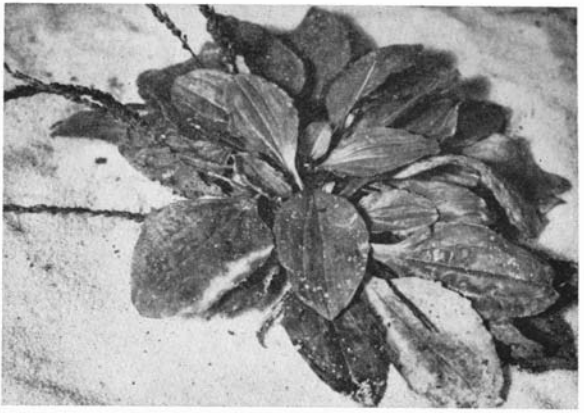


leaf

Annual or biennial. Leaves large, hairy, on long petioles. Flowers small, 5 white petals, borne single or in clusters. Seed pods are flat disks. *Control C, page 25.*



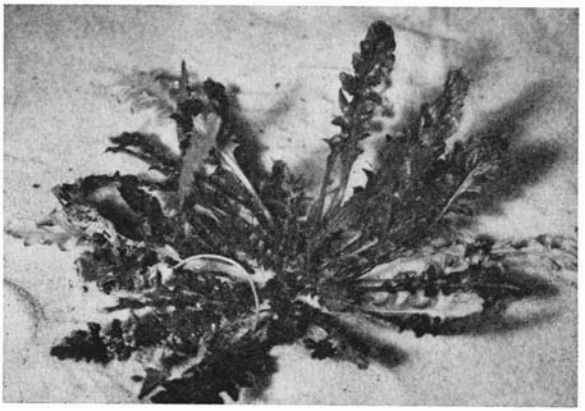
ROUNDLEAVED MALLOW, Cheeses
Malva neglecta



RUGEL'S PLANTAIN, Blackseed plantain
Plantago rugelii

leaf

Perennial. Leaves broad, egg-shaped, with conspicuous veins; supported on long-channeled, purplish based petioles. Long, erect seed spike. Flowers inconspicuous. Common or broadleaf plantain (*Plantago major*) similar to Rugel's plantain but petioles not purplish. *Control A, page 24.*



SHEPHERD'S PURSE
Capsella bursa-pastoris

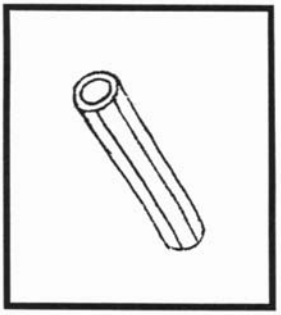
leaf

Annual or winter annual. Leaves in rosette at ground level, coarse-toothed lobes. Stems erect, with gray hairs and small base. Flowers white, 4-petaled. *Control A, page 24.*

leaf

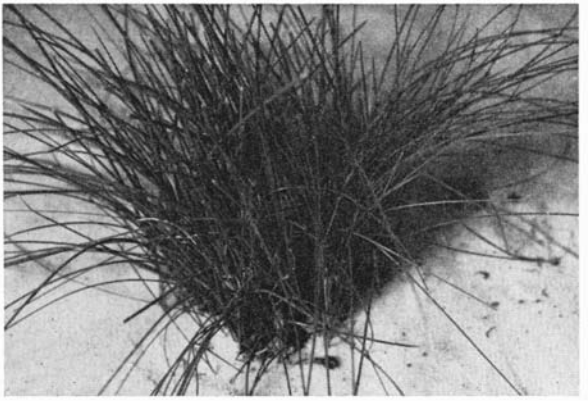
Perennial. Creeping, mat forming. Leaves divided into 3 leaflets, long petiole. Flowers white. *Control C, page 25.*

WHITECLOVER
Trifolium repens



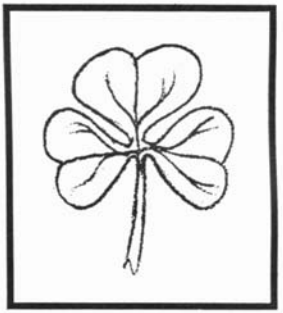
portion of leaf

Perennial. Leaves slender, smooth, hollow, nearly round; attached to lower portion of stem. Outstanding characteristic: onion odor. *Control B, page 25.*



WILD GARLIC
Allium vineale

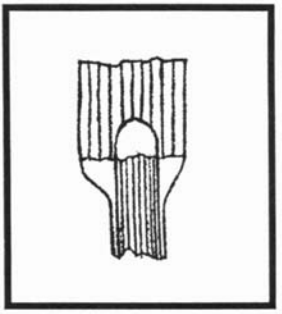
YELLOW WOODSORREL
Oxalis stricta



leaf

Annual or perennial. Sour-tasting. Leaves divided into 3 heart-shaped leaflets. Stems hairy, branch at base. Flowers pale yellow, 5-petaled, occur in clusters. Seed pods slender and pointed, 5 ridges alongside. *Control C, page 25.*

ANNUAL BLUEGRASS
Poa annua

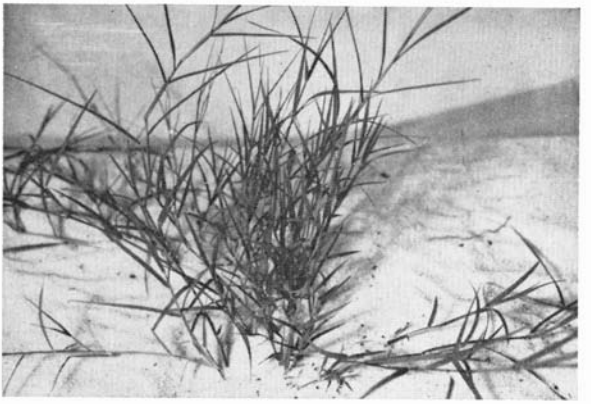


junction of blade and sheath

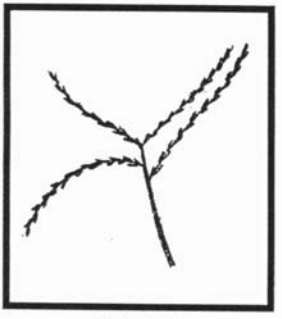
Annual. Often recumbent. Grows without rhizomes. Leaves light-green, keel-shaped at tip, rounded to acute ligule. *Control D-1, page 25.*

leaves and portion of stem

Perennial. Stems smooth, stout, root at joint. Leaf blades have fringe of long hair above collar; leaf sheaths sparsely hairy. Ligule is a ring of long, white hairs. *Control G, page 26.*

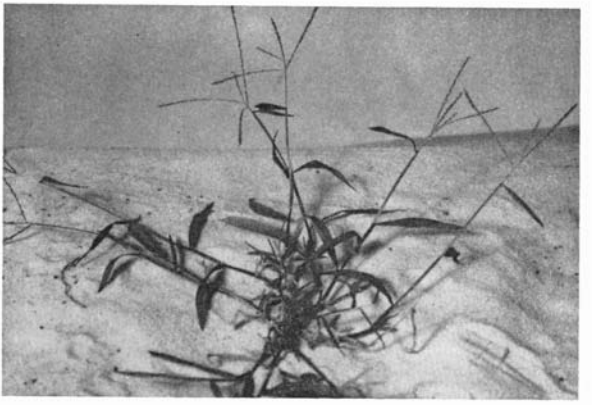


BERMUDAGRASS, Devilgrass
Cynodon dactylon



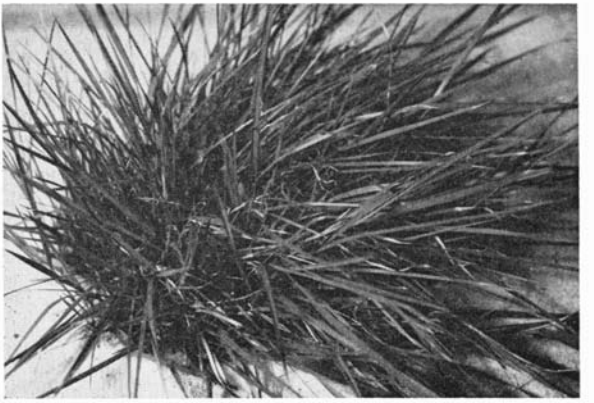
inflorescence

Annual. Stems stout, commonly prostrate, root at joints. Leaves without hairs, may be purplish or bluish. Seed usually arranged singly, borne on 3-10 fingerlike projections at top of stem. *Control D-1, page 25, or Control D-2, page 26.*

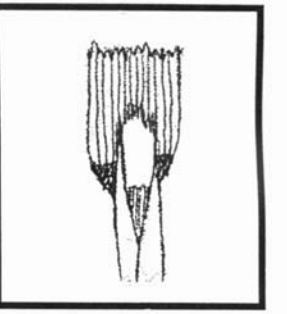


CRABGRASS, Smooth crabgrass, small crabgrass
Digitaria ischaemum

LARGE CRABGRASS, Large hairy crabgrass
(*Digitaria sanguinalis*). Similar to smooth crabgrass except that leaf blades and sheaths usually hairy.

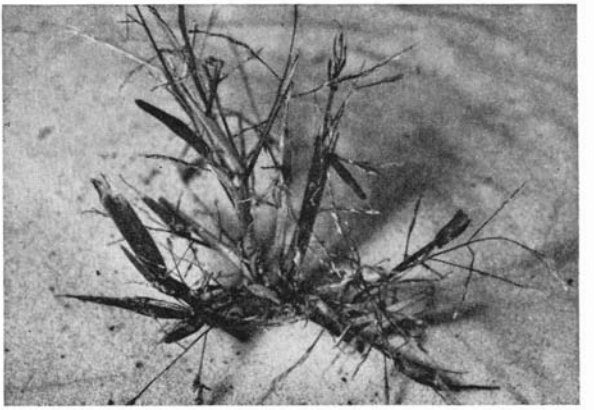


CREEPING BENTGRASS
Agrostis palustris

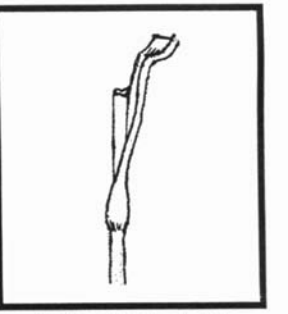


junction of blade and sheath

Perennial. Long, prostrate stolons produce circular patches. Leaves short and flat, tapered points; may be very fine with noticeable veins. *Control C, page 25.*



FALL PANICUM, Spreading panicgrass
Panicum dichotomiflorum

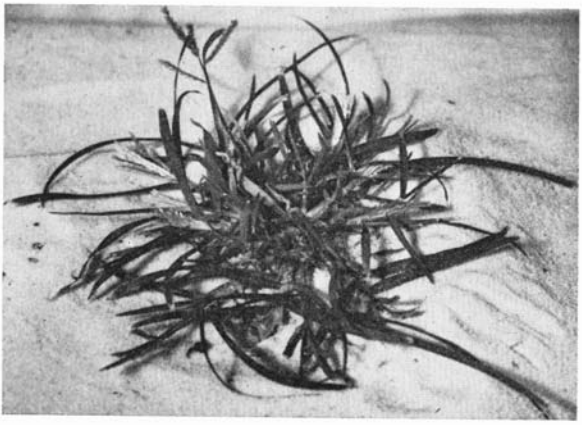


portion of leaf and stem

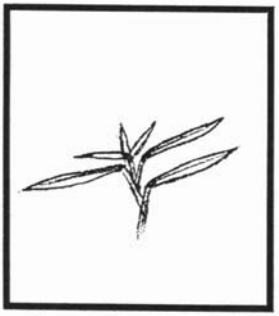
Annual. Spreading. Stems smooth; lower nodes swollen, often rooting. Leaves smooth. Sheaths are short and smooth, loose around stem, and often purplish. *Control D-2, page 26.*

inflorescence

Annual. Stems smooth, usually almost prostrate. Leaves dark-green, smooth, sometimes slightly roughened. Seed borne on fingerlike projections. *Control D-2, page 26.*



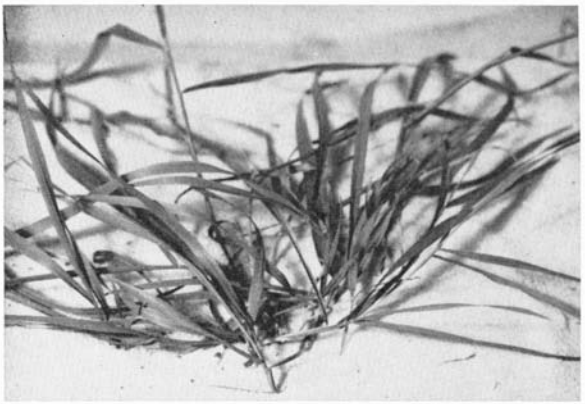
GOOSEGRASS, Yardgrass, silver crabgrass
Eleusine indica



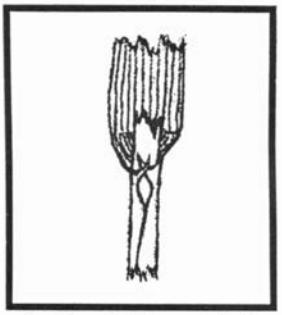
leaves and portion of stem

Perennial. Stems slender, without hairs; branch and lie on soil; root at nodes. Leaf blades flat and short (½-2 inches), few hairs; sheath not hairy or tight about stem. *Control F, page 26.*

NIMBLEWILL
Muhlenbergia schreberi



QUACKGRASS, Couchgrass
Agropyron repens



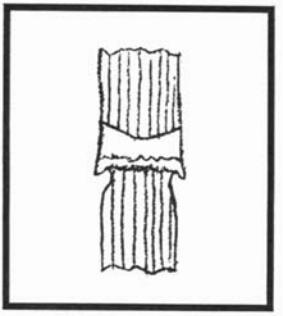
junction of blade and sheath

Perennial. Stems smooth. Lower leaf sheaths hairy, auricles clawlike. Rootstock extensively developed. *Control E, page 26.*

STINKGRASS, Lovegrass
Eragrostis cilianensis

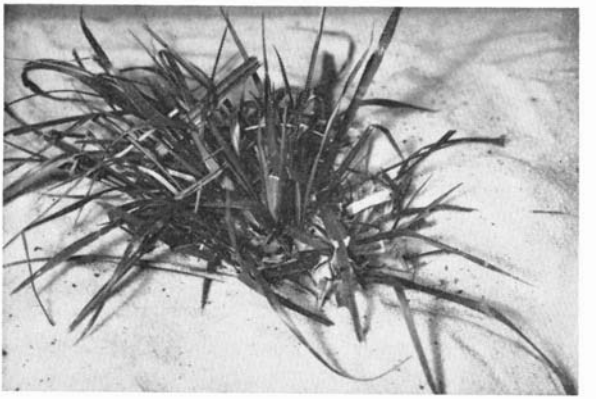
seed

Annual. Disagreeable smelling. Stems smooth, slender; several stems from each root crown. Leaves flat, smooth, saw-toothed edges. 20-40 seed per spikelet. *Control H, page 26.*

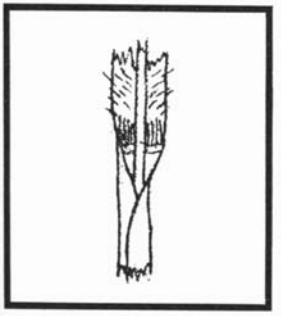


junction of blade and sheath

Perennial. Stems smooth and wiry. Lower leaf surfaces glossy; upper leaf surfaces have definite lines. *Control E, page 26.*

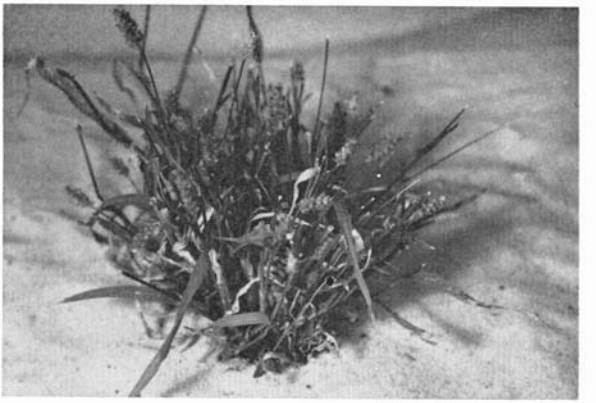


TALL FESCUE
Festuca elatior arundinaceae



junction of blade and sheath

Annual. Leaves flat; long hairs on upper surface near base. Stem and seed-bearing panicle stand erect. Seeds cross-striated; seed heads have yellow bristles. *Control D-2, page 26.*



YELLOW FOXTAIL, Yellow bristlegrass, pigeon grass
Setaria lutescens

CONTROL OF LAWN WEEDS

Weeds may become established in a variety of ways. The seed are present in many soils in very large numbers. Some lawn seed mixtures may contain grass seed that do not belong in a good lawn. When choosing a grass seed or mixture of grass seed, make sure that no seed are present that will become troublesome in an established lawn. Of course, there is always a chance that weed seed will blow in or be brought in with topsoil, etc.

One of the best ways to control weeds is to maintain a dense stand of grass. The grass competes with the weeds for light, moisture, and other essentials of growth, and this competition reduces the number of weeds. You can obtain a dense stand of grass through proper fertilization, mowing, and watering. Circular 729, "How to Have an Attractive Lawn," contains information about establishing and maintaining a satisfactory lawn. You can get a copy of this circular from your county extension adviser, or by writing to the Information Office, College of Agriculture, Urbana.

Mowing too close decreases the vigor of the grass, allowing weeds to come into the turf. The clipping height varies with different grasses. Kentucky bluegrass and red fescue lawns should be clipped to a height of 2 inches, Merion Kentucky bluegrass to 1½ inches, and bentgrass from ½ to ¾ inch.

Frequent shallow watering favors weeds. Soak the soil to a depth of 6 to 8 inches, and allow a week or more between waterings. Don't water for a couple of days after applying a herbicide.

If you have only a few weeds in your lawn, you may be able to control them by pulling. But many weeds (dandelion, quackgrass, etc.) have extensive roots and stems. These roots and stems break when pulled, and later send up shoots that restore the weeds.

Lawn weeds can sometimes be controlled by digging, but this method is tedious and time-consuming. If you have a large number of weeds in your lawn, you will probably want to use chemicals to control them.

Chemical Weed Control

Many chemicals are now available for controlling weeds in home lawns. If used properly, these materials will usually control weeds without injuring the turf. *Be sure to read the label for instructions on how to apply.*

Soil fumigation

Soil fumigation materials are used to destroy the vegetation, insects, seeds, nematodes, and disease organisms in the treated area. The effective depth depends upon the chemical used and the condition of the soil. These materials are usually more effective near the soil surface.

Some fumigation materials are dangerous. They are often expensive, and may only partially control weeds and other pests. If part of the seeds are destroyed, the remaining weeds will cover a larger area.

Certain weed seeds are more difficult to destroy than others. You must allow adequate time before seeding the treated areas. Some of the materials used for soil fumigation are calcium cyanamid, methyl bromide, chloropicrin, Vapam, and Mylone. For further information, you may want to refer to Circular 869, "Soil Fumigation." You can obtain this circular from your county extension adviser, or from the Information Office, College of Agriculture, Urbana.

Broadleaved weeds

2,4-D AND SIMILAR COMPOUNDS. 2,4-D will control many broadleaved weeds throughout the growing season. Spring applications usually give satisfactory results. Weeds may be more resistant to 2,4-D at certain times than at others. Mature weeds are commonly less susceptible to 2,4-D than young ones.

The ester form of 2,4-D is more active than the amine form, and only about half as much of the ester form is required for weed control.

2,4-D may be applied in several ways. Spraying is the most common method. A small sprayer with a capacity of 2 to 5 gallons is usually adequate for home lawns. It is often desirable to make only spot treatments of the weeds. Spot treatments give the added insurance of destroying the plants only in small areas in case a mistake is made.

Granular 2,4-D may be applied with a lawn seeder. Fertilizers are often mixed with granular herbicides so that the lawn can be fertilized and weeds controlled at the same time. If you have only a few weeds, you can control them by tying a sponge on a stick, wetting the sponge with a solution of the herbicide, and then pressing the sponge against the individual weeds.

A wax bar impregnated with 2,4-D can also be used. The bar is pulled over the area to be treated, and some of the wax containing 2,4-D comes off on the weeds and grass. This method reduces the volatility and danger of drift. Another method of application is to use

a device with a plunger. The device is placed on the plant to be treated, and when the plunger is depressed, a measured amount of 2,4-D drops on the weed.

Always use 2,4-D with extreme caution and as directed on the container. Drift from 2,4-D may kill or injure certain plants near the area being treated. Often plants half a mile from the sprayed area have been damaged by drift. Drift is influenced by the following conditions:

Wind. It is not wise to spray on a windy day because of the increased amount of drift.

Volatility. The volatility of dry formulations of 2,4-D is quite low. The ester form is very volatile, and should be used with great caution. Since the amine form is non-volatile, it is the best to use on home lawns.

Fineness. The fineness of the spray is dependent upon nozzle size and pressure. The finer the spray, the greater the drift.

Temperature, nozzle height, etc. also influence drift.

Plants that are sensitive to 2,4-D should not be sprayed with a sprayer used for 2,4-D. If it is necessary to use a sprayer for both 2,4-D and other chemicals, wash it carefully with activated charcoal or household ammonia.

Use 1 ounce of activated charcoal and 1 ounce of household detergent in 2 gallons of water. Shake the sprayer for a minute or two, and then discharge the solution through the nozzle. If you use household ammonia, fill the sprayer with a solution of ammonia and water mixed at the rate of 2 tablespoons of ammonia per 1 quart of water. Discharge a small amount of the solution through the nozzle, and allow the remaining solution to stay in the sprayer overnight. The following day, rinse the sprayer carefully with fresh water. Be sure that the nozzle and hose are thoroughly rinsed.

Some of the common plants that are highly susceptible to 2,4-D are grapes, tomatoes, and redbud trees. Many other plants may be killed or severely injured by 2,4-D, including bentgrass and clover. If the area to be treated is near desirable plants, take all possible precautions to cut down the chances of injury. You may want to investigate the possibility of using another material to control the weeds. Certain localities have laws prohibiting the use of 2,4-D because of the damage it has caused.

2,4-D is used primarily as a post-emergence treatment (applied after the weeds come up) on home lawns. The amount of 2,4-D necessary to control different weeds varies with the type of weed.

2,4-D cannot be used as a pre-emergence (applied before the weeds come up) or post-emergence treatment on newly seeded or newly established lawns.

In recent years, 2,4,5-T and 2,4,5-TP (silvex) have been widely used to control weeds in home lawns. These compounds control the same weeds as those controlled by 2,4-D, and are more effective against certain other weeds. For this reason, it is often desirable to use them. 2,4,5-T and 2,4,5-TP are similar to 2,4-D, and the discussion of 2,4-D also applies to them.

OTHER COMPOUNDS. Such chemicals as Zytron and endothal have also proved satisfactory controls for certain broadleaved weeds. After these materials are used for weed control, varying periods of time must elapse before the treated area can be seeded.

Grassy weeds

In recent years, many excellent chemicals have been put on the market for pre-emergence control of crabgrass and certain other annual grasses. These materials may also control certain broadleaved weeds.

Dacthal, Zytron, Betasan, Bandane, and calcium arsenate have given consistently good results in crabgrass control. All of these chemicals should be used as directed on the container. Most of the pre-emergence chemicals are in dry form, and may be applied with a lawn seeder along with the fertilizer. Be sure that the spreader doesn't overlap or that you don't apply too much material in any other way. Calibrate the spreader before using. Over-application of the chemical can damage the grass.

Pre-emergence materials must be applied before weed seed germinate. A rule of thumb is to apply the chemical before the lilacs bloom or the early-blooming magnolia petals fall.

The materials for pre-emergence crabgrass control should be applied only to well-established lawns. Do not use these materials on newly seeded lawns. After treating a lawn with pre-emergence chemicals, allow the recommended period of time to elapse before seeding.

Several materials give successful post-emergence control of many of the annual weedy grasses in established lawns. These include AMA and DSMA. The weedy area is sprayed with the chemical 2 or 3 times at weekly intervals. Temperature variations may make it necessary to use more or less material. Check the label on the container to be certain of the amount to use. Any of the materials on the market should work well if you follow the directions on the container.

Non-selective herbicides

Non-selective herbicides are those that kill all vegetation. They are often used for spot treatments of perennial weedy grasses that are difficult to control. You may need to wait a specified period of time before seeding, sodding, or plugging the treated areas.

The most commonly used material for spot treatment is dalapon. Because of the characteristics of certain plants, non-selective materials may not give complete control. These materials do not affect the seed in the soil.

Non-selective materials are also available in wax bars for killing weeds in patios and driveways and near fences, sidewalks, etc. If not applied properly, these herbicides may wash into other areas with heavy rains and cause considerable damage.

Ordinarily, non-selective materials are applied only as a last resort. If you use these chemicals, *be careful.* Don't get them on any desirable plants or on the lawn.

List of Controls

Follow directions on container as closely as possible. Materials may vary from manufacturer to manufacturer.

CONTROL A: 2,4-D

Often necessary to treat more than once. Can damage bentgrass, clover, and other desirable plants. Do *not* spray new lawns until after first mowing.

Weed	*Usual best time to treat*	*Degree of control*
Canada thistle	Spring and fall	Fair to good
Carpetweed	Spring	Good
Chicory	Spring	Good
Curled dock	Spring and fall	Good
Dandelion	Spring and fall	Good
Field bindweed	Spring and fall	Poor to fair
Heal-all	Spring	Good
Hedge bindweed	Spring and fall	Poor
Plantain, Buckhorn	Spring	Good
Plantain, Rugel's and common	Spring	Good
Rough pigweed	Spring	Good
Shepherd's purse	Spring and fall	Good
Wild carrot	Spring	Good
Yellow nutgrass	Spring	Poor

CONTROL B: 2,4-D (ester)

Use at highest recommended rate on container. Spot treatment — may be required over several years.

Weed	*Usual best time to treat*	*Degree of control*
Wild garlic Wild onion	Late fall and early spring	Fair

CONTROL C: 2,4,5-TP (silvex)

Often necessary to treat more than once. Can damage bentgrass, clover, and other desirable plants. Do not spray new lawns until after grass is well established.

Weed	*Usual best time to treat*	*Degree of control*
Black medic	Early spring	Good
Common chickweed	Spring and fall	Good
Creeping bentgrass	Fall	Poor
Ground ivy	Spring and fall	Good
Henbit	Spring and summer	Good
Prostrate knotweed	Late winter and early spring	Good
Mouse-ear chickweed	Spring and fall	Good
Prostrate spurge	Spring	Fair
Purslane speedwell	Spring	Fair to good
Red sorrel	Spring	Poor to fair
Roundleaved mallow	Spring	Fair
Spotted spurge	Spring	Fair to good
Violet	Spring and fall	Fair to good
Whiteclover	Spring, summer, fall	Good
Yarrow	Spring	Fair
Yellow woodsorrel	Spring	Fair to good

CONTROL D-1: (Pre-emergence) Calcium arsenate, Dacthal, Zytron, Bandane, and Betasan

Be careful to apply evenly. May thin grass and reduce germination of annual weeds. Reseeding must be delayed for up to a year.

Weed	*Usual best time to treat*	*Degree of control*
Annual bluegrass	Late fall or early spring	Poor
Crabgrass or large crabgrass	Late winter or early spring	Good

CONTROL D-2: (Post-emergence) DSMA and AMA

2 to 3 applications required at 7- to 10-day intervals. May cause slight discoloration of lawn grass. Reduce rates under high temperature.

Weed	*Usual best time to treat*	*Degree of control*
Crabgrass or large crabgrass Fall panicum Goosegrass Sandbur Yellow foxtail	Spring and early summer	Fair to good

CONTROL E: Dalapon

Will kill all plants treated. Restrict treatment to small areas.

Weed	*Usual best time to treat*	*Degree of control*
Tall fescue	Spring, summer, fall	Good
Quackgrass	Spring, summer, fall	Fair to good

CONTROL F: Liquid Zytron or endothal

Not always satisfactory. Requires repeated treatments. Endothal may cause discoloration of turfgrass. Cannot seed for some time after using Zytron.

Weed	*Usual best time to treat*	*Degree of control*
Prostrate knotweed	Spring	Fair
Nimblewill	Spring	Fair

CONTROL G: Methyl bromide or dalapon

Methyl bromide is a dangerous gas, and is *not* recommended for general use. 2-3 applications of dalapon at 5- to 20-day intervals give fair control.

Weed	*Usual best time to treat*	*Degree of control*
Bermudagrass	Spring or summer	Good to fair

CONTROL H: No good control except fumigation or sterilization.

Stinkgrass

As an aid to identification, the common names and active ingredients of herbicides frequently used in weed control are listed below.

Common Name	*Active Ingredient*
Calcium cyanamid	Calcium cyanamid
Chloropicrin	Nitrochloroform
Methyl bromide	Methyl bromide
Mylone	3,5-dimethyltetrahydro-1,3,5,2H-thiadiazine-2-thione
Vapam or VPM	Sodium methyl dithiocarbamate
2,4-D	2,4-dichlorophenoxyacetic acid
2,4,5-T	2,4,5-trichlorophenoxyacetic acid
2,4,5-TP	2-(2,4,5-trichlorophenoxy) propionic acid
Calcium arsenate	Tri-calcium arsenate
Dachthal	Dimethyl 2,3,5,6-tetrachloroterephthalate
Zytron	0-(2,4-dichlorophenyl) 0-methyl isopropyl phosphoramidothioate
Bandane	Polychlorodicyclopentadiene isomers
Betasan	N-(beta-0, 0 di-isopropyl dithiophosophoryl-ethyl)-benzine sulfonamide
AMA	Amine methyl arsonate
DSMA	Disodium monomethylarsonate
Endothal	3,6-endoxohexahydrophthalic acid
Dalapon	2,2-dichloropropionic acid

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